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1.0 IMPORTANT RECEIVING INSTRUCTIONS

Visually inspect all components for shipping damage. Shipping damage is not covered by warranty. If shipping damage is found, notify carrier at once. The carrier is responsible for all repair and replacement costs resulting from damage in shipment.

2.0 SAFETY

2.1 Introduction

Read all instructions carefully. Follow all recommended safety precautions to avoid personal injury as well as damage to the product and/or damage to other property. Enerpac cannot be responsible for any damage or injury from unsafe use, lack of maintenance or incorrect operation. Do not remove warning labels, tags, or decals. In the event any questions or concerns arise, contact Enerpac or your local Enerpac distributor for clarification.

If you have never been trained on high-pressure hydraulic safety, consult your distributor or service center for information about an Enerpac Hydraulic Safety Course.

This manual follows a system of safety alert symbols, signal words and safety messages to warn the user of specific hazards. Failure to comply with these warnings could result in death or serious personal injury, as well as damage to the equipment or other property.



The Safety Alert Symbol appears throughout this manual. It is used to alert you to potential physical injury hazards. Pay close attention to Safety Alert Symbols and obey all safety messages that follow this symbol to avoid the possibility of death or serious personal injury.

Safety Alert Symbols are used in conjunction with certain Signal Words that call attention to safety messages or property damage messages and designate a degree or level of hazard seriousness. The Signal Words used in this manual are WARNING, CAUTION and NOTICE.



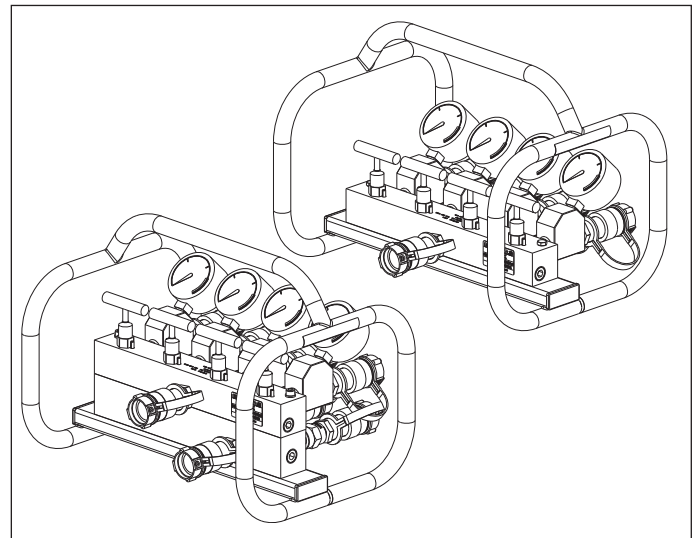
WARNING Indicates a hazardous situation that, if not avoided, could result in death or serious personal injury.



CAUTION Indicates a hazardous situation that, if not avoided, could result in minor or moderate personal injury.



NOTICE Indicates information considered important, but not hazard related (e.g. messages relating to property damage). Please note that the Safety Alert Symbol will not be used with this signal word.



2.2 Safety Precautions



Failure to observe and comply with the following precautions could result in death or serious personal injury. Property damage could also occur.

- Read and completely understand the safety precautions and instructions in this manual before operating the puller or preparing it for use.
- Wear appropriate personal protective equipment (PPE) such as safety glasses and face shield. The operator must take precautions against injury due to flying debris caused by possible failure of the tool or workpiece.
- Do not exceed equipment ratings. Overloading causes equipment failure and possible personal injury. The manifolds are designed for a max. pressure of 10,150 psi [700 bar]. Do not connect a jack or cylinder to the manifold with a higher pressure rating.
- During operation, keep hands and fingers away from the work area to avoid personal injury.
- Use hydraulic pressure gauges to verify proper operating pressure in the hydraulic system. Do NOT exceed maximum pressure limits of the lowest rated component in your system. Always use high pressure hoses and fittings.
- The system operating pressure must not exceed the pressure rating of the lowest rated component in the system. Check the pressure in the gauges in the system to monitor operating pressure. It is your window to what is happening in the system.
- Always read, understand and follow all safety precautions and instructions, including those that are contained within the procedures of this manual.
- On double-acting cylinders be certain that hoses are connected at BOTH couplers. Never attempt to pressurize a double-acting cylinder if only one hose is connected.
- Fully hand-tighten all couplers. Loose coupler connections will block the flow of oil between the pump and the cylinder.
- Hand-tighten adapters and attachments until full thread engagement occurs and the item can no longer be turned by hand. Do not use tools.

2.3 Additional Hydraulic Safety Precautions

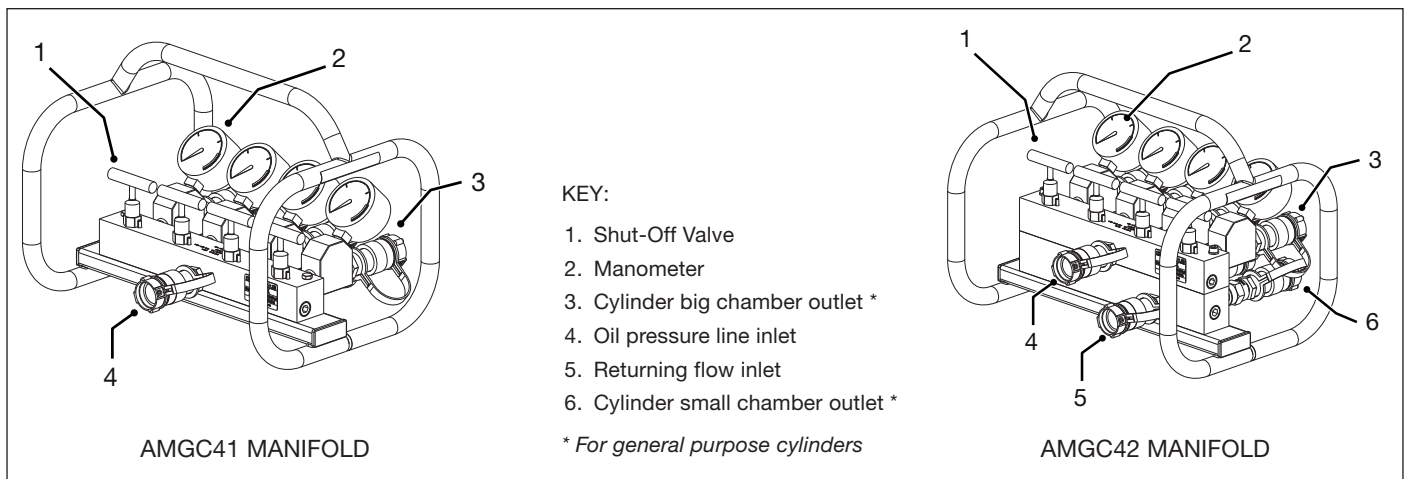


Failure to observe and comply with the following precautions could result in death or serious personal injury. Property damage could also occur.

- Do not remove or disable the pump relief valve. Never set the relief valve to a higher pressure than the maximum rated pressure of the pump.
- To avoid personal injury and equipment damage, make sure all hydraulic components are rated for at least 10,150 psi [700 bar] working pressure.
- The system operating pressure must not exceed the pressure rating of the lowest rated component in the system. Install pressure gauge(s) in the system to monitor operating pressure. It is your window to see what is happening in the system.
- Make sure that all system components are protected from external sources of damage, such as excessive heat, flame, moving machine parts, sharp edges and corrosive chemicals.
- Do not handle pressurized hoses. Escaping oil under pressure can penetrate the skin. If oil is injected under the skin, see a doctor immediately.
- Always do a visual inspection of the system before placing it into operation. If any problems are found, do not use the manifolds. Have the equipment repaired and tested before it is returned to service.
- Never use a manifold that is leaking oil. Do not use a manifold that is damaged, altered or in need of repair.
- Do not loosen plugs, relief valves or any other hydraulic components unless hydraulic pressure is completely relieved.
- Always be sure that hydraulic pressure is fully relieved before disconnecting hydraulic hoses, loosening hydraulic couplers, or performing any cylinder disassembly or repair procedures.
- Always read, understand and follow all safety precautions and instructions, including those that are contained within the procedures of this manual.
- Shut Off valves should always be closed when no hydraulic hoses are being used on those valves.



Failure to observe and comply with the following precautions could result in minor or moderate personal injury. Property damage could also occur.



- Do not lift hydraulic equipment by the hoses or swivel couplers. Use the carrying handle or strap.
- Keep hydraulic equipment away from flames and heat. Excessive heat will soften packings and seals, resulting in fluid leaks. Heat also weakens hose materials and packings. For optimum performance, do not expose equipment to temperatures of 150°F [65°C] or higher. Protect all hydraulic equipment from weld spatter.
- Immediately replace worn or damaged parts with genuine Enerpac parts. Enerpac parts are designed to fit properly and to withstand high loads. Non-Enerpac parts may break or cause the product to malfunction.



- Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact the Enerpac Authorized Service Center in your area.
- To help ensure proper operation and best performance, use of Enerpac oil is strongly recommended.
- Use dust cap(s) when manifolds is disconnected from the hose(s). Keep the entire manifolds clean to prolong its life.

3.0 DESCRIPTION

Portable assembly of hydraulic manifolds for single acting or double acting cylinders up to 10,150 psi [700 bar] of pressure. Split flow for up to 4 multi point lifting.

The manifolds have the following main elements (Refer to Figure 1, 2 & 3 for references):

1. Shut-Off valve: This valve allows to the operator open or close the flow to the output.
2. Manometer: Every output is supplied with a manometer up to 10,150 psi [700 bar] of pressure. The operator can check the pressure in the outlet line.
3. Manifold outlet A: Oil flow outlet that must be connected to the cylinder.
4. Manifold inlet P: Oil flow inlet. The HPU outlet must be connected to this point.
5. Manifold inlet T: For double acting pumps, the HPU returning line must be connected to this inlet.
6. Manifold outlet B: For double acting cylinders, this outlet must be connected to the returning oil flow of the cylinder (i.e. the small chamber for general purpose cylinders).

Figure 1, Manifolds Main Components

In the previous paragraphs the points 5 & 6 refers only to the manifold AMGC42. This manifold is installed for double acting cylinders for returning oil flow purposes.

4.0 INSTALLATION

For the installation see the following steps

AMGC41:

1. Connect the hydraulic pump pressure line to the inlet P. Refer to Figure 2
2. Connect each outlet A to the single acting cylinder coupler.
3. Fully hand-tighten all couplers. Loose coupler connections will block the flow of oil between the pump and the cylinder

AMGC42:

1. Connect the hydraulic pump pressure line to the inlet P. Refer to Figure 3
2. Connect each outlet A to the double acting cylinder in the big chamber coupler (general purpose cylinder case).
3. Connect each outlet B to the double acting cylinder in the small chamber coupler (general purpose cylinder case).
4. Connect the hydraulic pump return line to the inlet T.

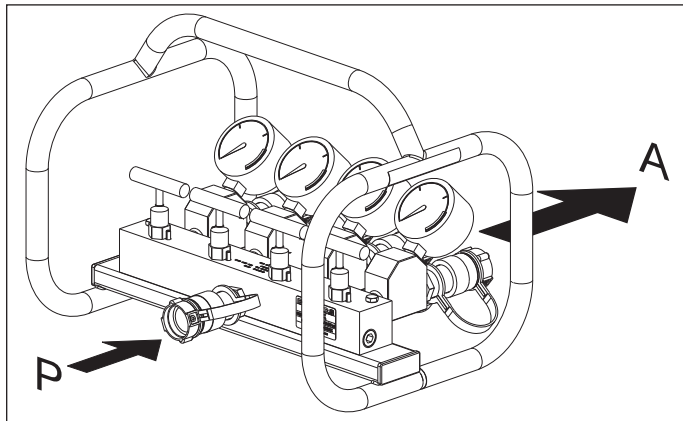


Figure 2, Connections Scheme for the AMGC41 Manifold

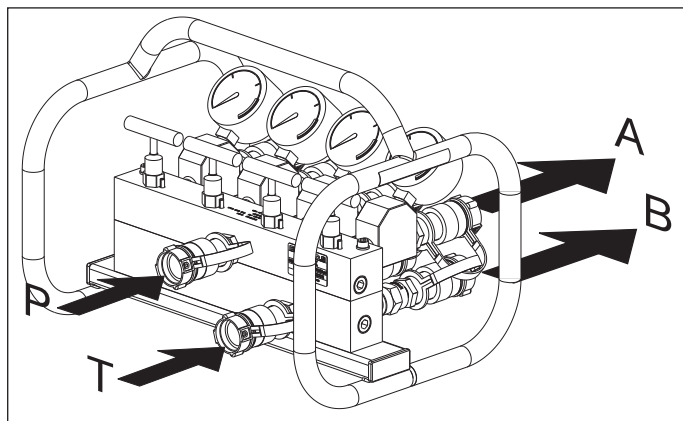


Figure 3, Connections Scheme for the AMGC42 Manifold

5.0 OPERATION

Operate the hydraulic pump to advance and retract the cylinder.

The manifolds are designed to work up to 4 single or double acting cylinders.

Turn the shut-off valves in the clockwise direction in order to close completely the oil flow. Refer to Figure 4.

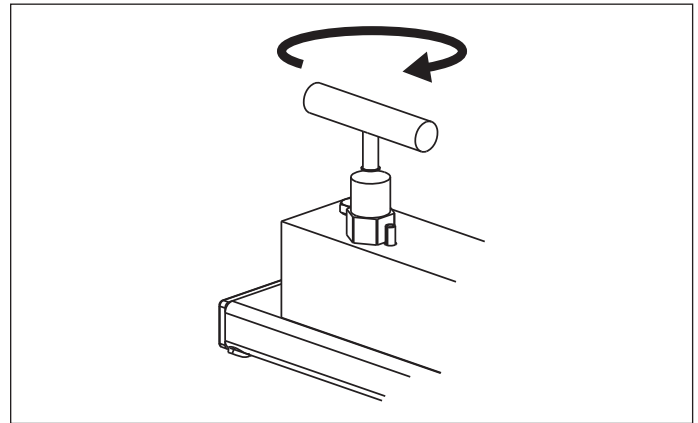


Figure 4, Closing the shut valve

6.0 MAINTENANCE

Use the following advises when long term storage:

1. Use only Enerpac oil with the manifolds. The use of any other oil may invalidate your warranty.
2. Use dust cap(s) when manifold is disconnected from the hose(s). Keep the entire manifold clean to prolong its life.
3. Store manifold in a clean and dry place.
4. Spread metallic parts with wax oil. This will help protect the manifold from corrosion.

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